

METHOD FOR FABRICATING SEMICONDUCTOR DEVICE WITH SELF-ALIGNED STORAGE NODE

ABSTRACT OF THE DISCLOSURE

5 A method for fabricating a semiconductor device includes preparing a semiconductor substrate having a contact pad; forming a first insulating film having a storage node contact exposing the contact pad and having a stack structure of an upper interlayer insulating film, a bottom interlayer insulating film, and an etching stopper between the upper and bottom interlayer insulating layers that protrudes into the storage node contact; forming a first
10 conductive film for a storage node on the substrate; forming a second insulating film where a portion of a surface corresponding to the storage node contact is recessed; forming an etching mask layer on the recessed portion of the second insulating film; etching the second insulating film using the etching mask layer; forming a second conductive film for a storage node on the substrate; etching the first and second conductive films to isolate nodes; and
15 removing the etching mask layer, the second insulating film and the upper interlayer insulating film.